4115 Blackhawk Plaza Circle, Suite 100, Danville, CA 94506 (925) 648-2008 Fax (925) 648-2797

Compliance & Closure, Inc.

October 20, 2005

California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

Attention: Ms. Colleen Stone

RE: Interim Corrective Action Plan
Quik Stop No. 35
816 McMinn Avenue, Santa Rosa, California
(CCI Project No. 12032-3)

Dear Ms. Stone:

On behalf of Quik Stop Markets, Inc., Compliance & Closure, Inc. (CCI) hereby submits the attached Interim Corrective Action Plan for Quik Stop Market No. 35, located at 816 McMinn Avenue, Santa Rosa, Sonoma County, California.

CCI is prepared to implement this Corrective Action Plan once written approval is received from the RWQCB.

If you have any questions or require additional information, please call our office at (925) 648-2008.

Sincerely,
Compliance & Closure, Inc.

Gary R. Mulkey

Gary R. Mulkey, R.G. 5842

REGISTERED GEOLOGIST
GARY R. MULKEY
NO. 5842
STATE OF CALIFORNIA

Cc: Mr. Mike Karvelot, Quik Stop Markets, Inc.

Interim Corrective Action Plan

For

Quik Stop Market No. 35

816 McMinn Avenue

Santa Rosa, California

At the request of the California Regional Water Quality Control Board, North Coast Region (RWQCB), Compliance & Closure, Inc. (CCI) hereby submits this Interim Corrective Action Plan for Quik Stop Market No. 35, located at 816 McMinn Avenue, Santa Rosa, Sonoma County, California (Figure 1).

Site Background Information

In December 1998, Quik Stop Markets, Inc. (Quik Stop) removed two10,000-gallon, single wall steel tanks and re-installed two 12,000-gallon, double wall, fiberglass fuel tanks in the area of the existing excavation. Approximately 500 cubic yards of soil was excavated from the east side of the excavation to accommodate the new tanks. All the excavated soil was transported to TPS Technologies, Inc. in Richmond, California and treated (burned in a rotary kiln) and recycled for other use.

At the time of the tank removal, groundwater was present in the open excavation at approximately 8 to 9 feet below the ground surface. The excavation was deepened to 13 to 14 feet and extended to the east by 20 feet to accommodate the new tanks. In order to place the new tanks in the open pit, the contractor had to lower the water table within the excavation by several feet. Two, 21,000-gallon closed-top water tanks were brought to the site. A total of 30,000 gallons of water was pumped from the tank excavation and properly disposed by either vacuum trucks or by treating with carbon and discharging to the sanitary sewer system under the appropriate permits.

Based on data obtained during the tank excavation, visual observations, analytical laboratory results and the condition of the two fuel tanks at the time of their removal, it was concluded that some soil contamination existed on the side walls of the excavation. Such contamination may be the result of the rising and falling of the water table at the subject site, which can vary by as much as 10 feet between the wet and dry seasons. Some of the soil contamination on the north and east sides of the site was over-excavated and removed from the site during the enlargement of the excavation for the new fuel tanks. From 1998 to present, CCI has conducted quarterly groundwater monitoring of the site.

CCI prepared a Work Plan for additional Groundwater Investigation in July 2002. The work

plan was in response to the RWQCB's April 30, 2002 letter requesting further investigation of the site. The purpose of the investigation was to attempt to further define the extent of groundwater contamination at both on-site and off-site locations

CCI conducted the field work from June 17, 2003 through June 20, 2003. CCI installed a total of six additional monitoring wells at on-site and off-site locations. Three of these wells (MW-1B, MW-2B & MW-3B) were installed to depths of approximately 55 feet, into the "B-Aquifer", to monitor groundwater conditions in that zone. The other three wells (MW-7, MW-8 & MW-9) were installed in the upper "A-Aquifer" to better define and monitor the upper shallow water zone.

The additional groundwater investigation provided evidence of an aquitard separating shallow (A-Aquifer) and deep (B-Aquifer) water-bearing zones. A clay layer 5 to 10 feet thick was encountered in all three deep borings (MW-1B, MW-2B & MW-3B) in the interval generally between 30 and 40 feet below grade. During drilling, groundwater was generally encountered at approximately 15 feet below grade in the A-Aquifer borings and around 38 to 45 feet in the B-Aquifer borings. The groundwater flow direction in the A-Aquifer is toward the southwest, while the groundwater flow direction in the B-aquifer was toward the west.

Quarterly groundwater monitoring of the site indicates moderate levels of petroleum related contamination are present in shallow wells at the Quik Stop site. Initially, elevated concentration of petroleum hydrocarbons, including free phase product were encountered in B-Aquifer wells MW-1B and MW-3B. It should be noted in a discussion with Mr. Bill Erdei of the North Coast RWQCB, Mr. Erdei indicated that a hydrocarbon plume exists to the east of the Quik Stop site in the B-Aquifer, although a source of that plume has not been identified. The inferred groundwater flow in the B-Aquifer, being east to west, strongly suggests that the contamination in MW-1B and MW-3B at the Quik Stop site may be from an unidentified up-gradient source.

Based on the site background information, CCI has prepared this Interim Corrective Action Plan (ICAP).

Interim Corrective Action Plan Approach

Based on the RWQCB's request, CCI proposes a two-phased approach for the ICAP. The first phase of the project entails the installation of a groundwater remediation system, and the second phase of the ICAP involves the installation of additional perimeter wells to monitor the groundwater conditions in a down-gradient direction from the site.

Phase 1 - Remediation System

CCI proposes to treat the groundwater contamination in-situ using ozone injection technology. Ozone is a highly reactive chemical that is very effective in destroying a wide variety of organic compounds, including petroleum hydrocarbons and chlorinated solvents. The technology uses several sparge points (wells), which are constructed of porous plastic, and are connected to an ozone generator. Ozone is then introduced into the aquifer in the form of micro-fine air bubbles under low pressure to degrade the volatile compounds. The ozone destroys organic chemicals through the process of chemical oxidation, which takes place in-situ, and breaks the targeted chemicals into carbon dioxide and water. This remediation technique appears to be very suitable for the subject site due to the subsurface geologic conditions. Furthermore, the cost of operating this system is significantly less than above-ground treatment because no groundwater needs to be extracted for treatment.

General System Description

The ozone injection system called the Kerfoot Technologies C-Sparge® System (System) is connected to several Spargepoints® (Spargepoint) placed at selected locations throughout the site. The location of the Spargepoints will be selected to establish a "picket fence" network of wells around the site to treat compounds with ozone as the compounds migrate toward the southwest. Each Spargepoint measures 2 inches in diameter and 18 inches in length, and is connected to the surface by a 3/4-inch diameter, schedule 40, threaded, PVC riser pipe. A well head assembly is then attached to the top of the riser pipe. A surface vault box will cover each Spargepoint. The Spargepoints are then connected to 3/8-inch high density tubing, which are placed in 3-inch diameter PVC pipe, which lies in shallow trenches. The tubing is then connected to the master control unit, which, runs on a current of 120 V and has an ozone generator. The ozone generator is designed to generate very small (approximately 50 micrometers in diameter) bubbles of ozone. The master control unit injects 3 to 5 cubic feet per minute (CFM) of ozone for 8 to 12 minutes at each individual Spargepoint, at controlled rotating intervals. The ozone micro bubbles are forced into the surrounding water-bearing formation under very low pressure. The micro-fine bubbles produced at the master control panel are released to the groundwater at each Spargepoint. The encapsulated ozone reacts with dissolved compounds, producing harmless by-products. A general system installation description is as follows:

Construction Details

1. Compound Description

The master control panel will be placed on a 6' x 8' concrete pad, surrounded by a 6-foot high, chain link fence with a 3-foot gate. The compound will be located on the south side of the Quik

Stop Market (Figure 2 & Figure 6). The master control panel will be mounted with bolts on two, 4 x 4 x 6-foot posts anchored into the concrete pad and connected to a dedicated 120-volt, 25 amp electrical outlet.

2. Sparge Well Design

CCI estimates that approximately 10 Spargepoints will be needed to effectively cover the A aquifer at the site. In addition, CCI will convert five of the wells into double sparge wells, so that sparge wells extend into the A and B aquifers at the subject site (Figure 2). Five of the wells will have one sparge point extending into the A-aquifer and five wells will contain two Sparge wells, one extending into the A-aquifer and one extending into the B-aquifer. The number of sparge wells are based on an estimated subsurface permeability of 10 to 10^{-3} centimeters per second (cm/sec) and a 40-foot diameter radius of influence. The double Sparge well installation will be set to a depth of approximately 25 feet in the A-aquifer and to a depth of 55 feet in the B-aquifer. Each Sparge well will be constructed in the following manner:

A truck-mounted, B-61 drill rig with continuous-flight, 8-inch diameter hollow-stem auger will be situated over each boring location, and a hollow-stem auger will be used to advance the hole to the targeted depths. Prior to drilling each boring, the auger and other tools will be steam-cleaned to minimize the possibility of cross-contamination. A CCI geologist will log some of the borings to confirm subsurface lithology. These borings will be logged by collecting relatively undisturbed soil samples at 5-foot intervals to the bottom of the boring. Soil samples will be collected only for logging purposes using a standard pen sampling tube. The soils encountered will be characterized using the Unified Soil Classification System. All drill cuttings will be placed in Department of Transportation (DOT) approved drums, labeled and left at the site.

Sparge Well Construction

The five single sparge wells will be drilled to a depth of 25 feet. Each of the double Sparge wells will be drilled to a depth of approximately 55 feet. Each well will be constructed with a 2-inch diameter by 18-inch long Spargepoint (Figure 3 & Figure 4). Each Spargepoint will be connected to the surface by 3/4-inch diameter, schedule 40, threaded, PVC riser pipe. For the B-aquifer Sparge wells (55 feet), fine "sugar sand" will be placed around the Spargepoint and brought up to approximately the depth of the A-aquifer Spargepoint (25 feet). A second Spargepoint will be installed and fine "sugar sand" will be place around that Spargepoint to approximately 5 feet above the Spargepoint. A 2 to 3 foot thick bentonite clay spacer will be placed on top of the "sugar sand". Cement grout will then be pumped from above the bentonite to the surface. A well head assembly will be attached to the top of the two riser pipes (Figure 5). A surface vault box will cover each well head assembly. The Spargepoints will then be connected, by double contained tubing placed in shallow trenches, to the master control unit in

the compound.

3. Trenching/tubing connecting Spargepoints

Approximately 315 feet of underground pipe trench will be excavated from each of the Sparge wells located on the north, south and west sides of the restaurant site. An irrigation trenching machine will be used to dig a 4-inch wide by 12-inch deep trench in which to lay the Sparge well connection tubing, which will be the double contained tubing consisting of 3-inch schedule 40 PVC and the 3/8-inch ozone-air supply tubing. The trenches will then be backfilled with self-compacting pea gravel to within 2-inches of grade. A 2-inch lift of hot asphalt pavement will be placed on top of the pea gravel and compacted to grade.

QA/QC Sampling/System Monitoring Procedures

CCI will implement a monitoring and sampling program to oversee the operation of the proposed remediation system. At the beginning of the operation, the Sparge system will be inspected on a weekly basis to ensure proper operation of the component services.

CCI will continue to collect water samples on a quarterly basis to monitor the progress of the system. Prior to starting the system, CCI will collect groundwater samples from all site wells, following CCI's groundwater sampling protocol and dissolved oxygen (D.O.) meter calibration protocol. The water samples will be measured for temperature, pH, conductivity and D.O. CCI will continue to measure groundwater parameters (temperature, pH, conductivity and D.O. each time water samples are collected. All appropriate data will be summarized and included in the site quarterly monitoring report.

Phase II - Perimeter Well Installation

Based on review of site groundwater conditions, and the regional groundwater flow direction, CCI recommends that three additional wells be installed down gradient from the site on McMinn Avenue (Figure 7). The purpose of these wells are to monitor the progress of the site groundwater remediation. As contaminant level drop in the site wells, offsite contaminant levels will also be monitored. Two of the three wells will be place into the A and B aquifers (approximately 25 and 55 feet.) The third well will be installed below the B-aquifer to monitor conditions below the B-Aquifer.

Prior to commencing the well installations, CCI will obtain the proper permits from the City of Santa Rosa and Sonoma County to perform the proposed scope of work. In addition, Underground Service Alert (USA) will be notified of the drilling operation and all proposed sampling locations will be marked with white paint so that these areas can be "cleared" for utility

lines. CCI will also retain a private line location firm to "clear" the immediate area around each proposed well location.

Well Installation

CCI will install a total of three additional groundwater monitoring wells southwest of the subject site (Figure 7). The wells will be drilled with a truck-mounted, B-61 drill rig, using 8-inch outside diameter hollow stem augers, which will be cleaned prior to use. The borings will be advanced approximately 25 feet in the A-aquifer, 55 feet in the B-aquifer and the third well to a depth of 75 to 80 feet. A CCI geologist will log each borehole by collecting samples at 5-foot intervals, lithologic contacts of interest and areas of obvious contamination. Upon retrieval, the sampler will be disassembled into its component parts. One or more of the brass liners will be selected for chemical analysis. The ends of the selected liner(s) will be sealed with Teflon sheets, capped with plastic caps, labeled, logged on a chain-of-custody form and stored in a chilled chest containing ice for preservation in the field and during transport to the analytical laboratory. Each boring will be logged using the Unified Soil Classification System. Drill cuttings will be placed in approved Department of Transportation (D.O.T.) drums and left at the site pending laboratory analysis of the soil.

The monitoring wells will be constructed using 2-inch diameter, schedule 40 polyvinyl chloride (PVC) well casings. Ten to fifteen feet of screen will be used. The final well design will depend upon subsurface conditions encountered. The annulus between each casing and borehole will be backfilled with 2/12 sand to about 2 feet above the screen interval. A bentonite clay spacer, at least 2 feet thick, will be placed above the sand pack, and cement grout will be pumped from above the bentonite to the surface. A watertight, locking, vault box will cap each well. The wells will be developed prior to sampling, and sampled according to CCI's Sampling Protocol. The interval between development and sampling will be approximately 24 to 48 hours. The wells will be developed by manually bailing the wells to: (a) remove residual silts and clays left from the drilling and (b) improve the hydraulic conductivity between the wells and natural formation. The well development water will be stored on-site in sealed, labeled drums (D.O.T, 17E) pending laboratory results.

Before groundwater sampling, a CCI sample technician will measure the depth-to-groundwater using an electronic sounding tape and will field-check the wells for the presence of free-floating product by collecting a sample in a clear acrylic bailer or using an electronic sounder. The wells will be purged of stagnant water prior to the collection of a sample. Normal field measurements, including pH, conductivity, and water temperature, will be taken periodically and recorded during the purging process. A sample will be collected when these parameters stabilize to within 10% of each other. At least three well casing volumes of groundwater will be purged from each well before sampling. Samples will be (a) collected in a clean Teflon bailer, (b) transferred to

appropriate laboratory-supplied bottles, (c) labeled, (d) logged on chain-of-custody forms, and (e) placed in a chilled ice chest for transport to a state-certified laboratory. Once the laboratory results are known, the purge and sample water will be disposed of properly.

Surveying

A licensed land surveyor will be retained to survey the monitoring wells accurately and to determine the elevation of each well casing. The survey ensures accuracy so that the plot plans will portray the data in a manner useful for determining groundwater flow direction. The survey will include both horizontal and vertical measurements. Elevation readings will be measured to the nearest 0.01 feet and corrected to mean sea level. In addition, the new wells will be located using Geographical Positioning System (GPS).

Laboratory Analysis

All soil and groundwater samples will be submitted for analysis to Entech Analytical Labs, Inc. (Entech), a state-certified laboratory, located in Santa Clara, California. It is anticipated that the installation of the monitoring wells will generate between 10 and 20 soil samples and water samples will be collected from the newly installed wells for analyses. These samples will also be analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethyl benzene and total xylenes (BTEX) and fuel oxygenates using EPA Test Method 8260. The samples will be analyzed on a normal (10 working days) turn-around time frame.

Report Preparation

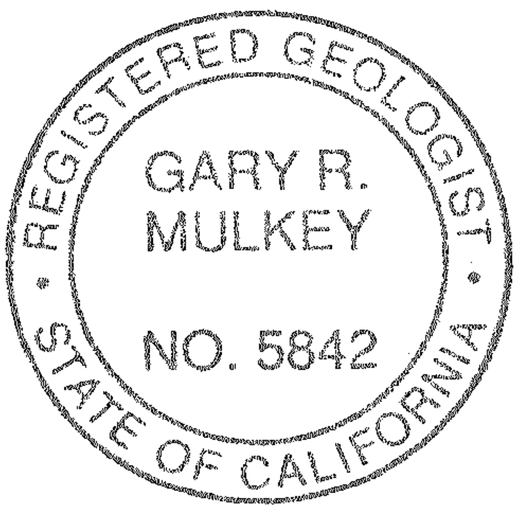
Upon receipt of the analytical results, a written report of the monitoring well installations will be prepared and submitted to Quik Stop Markets, Inc. The report will include exploratory boring logs, well construction details, chemical data tables, site plan, cross-sections and report narrative, with conclusions and recommendations. The report will then be submitted to the RWQCB for its view and comments.

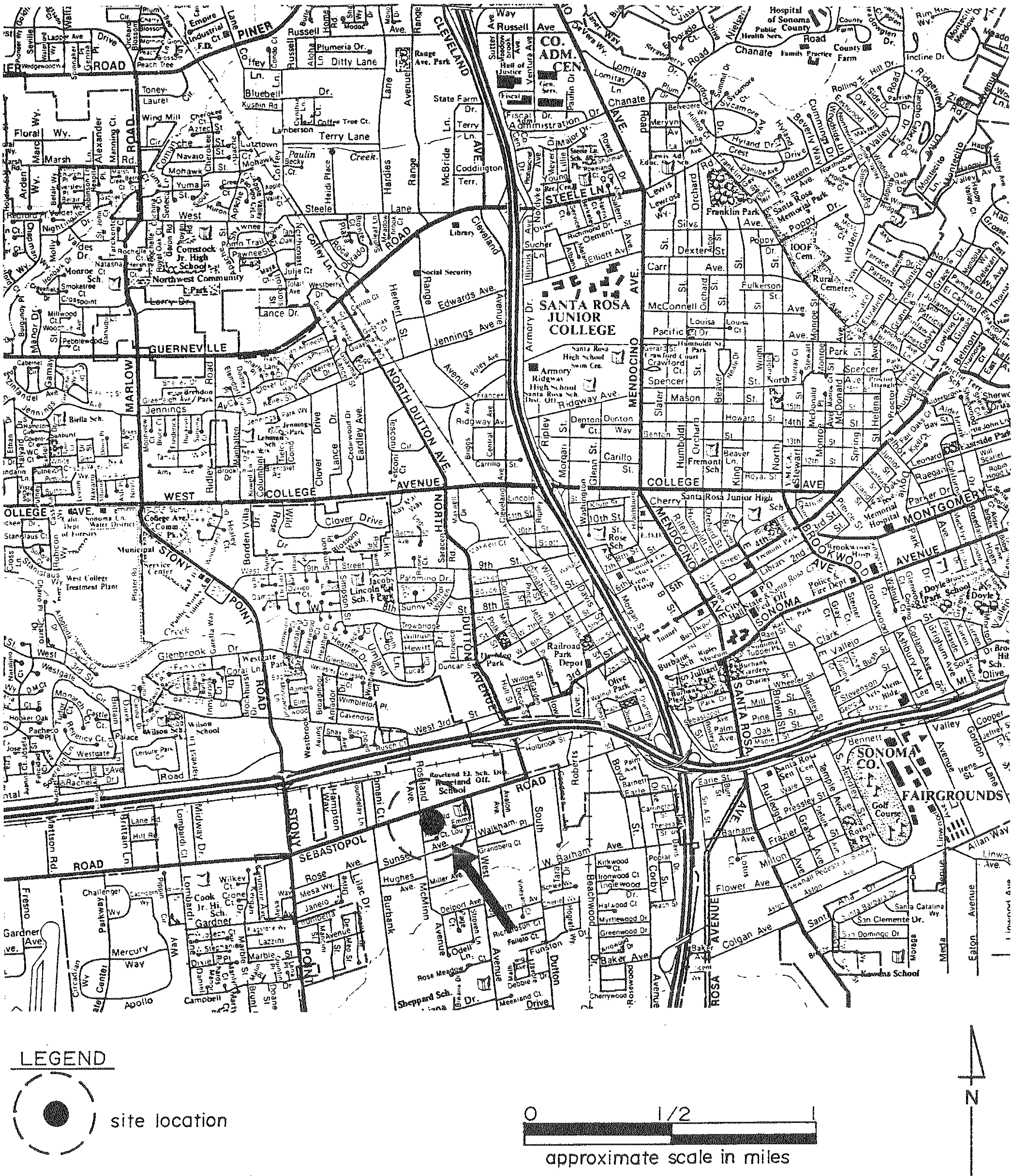
CCI would appreciate any comments RWQCB may have regarding this Interim Corrective Action Plan. If you have any questions, please call us at (925) 648-2008.

Sincerely,
Compliance & Closure, Inc.

Gary R. Mulkey

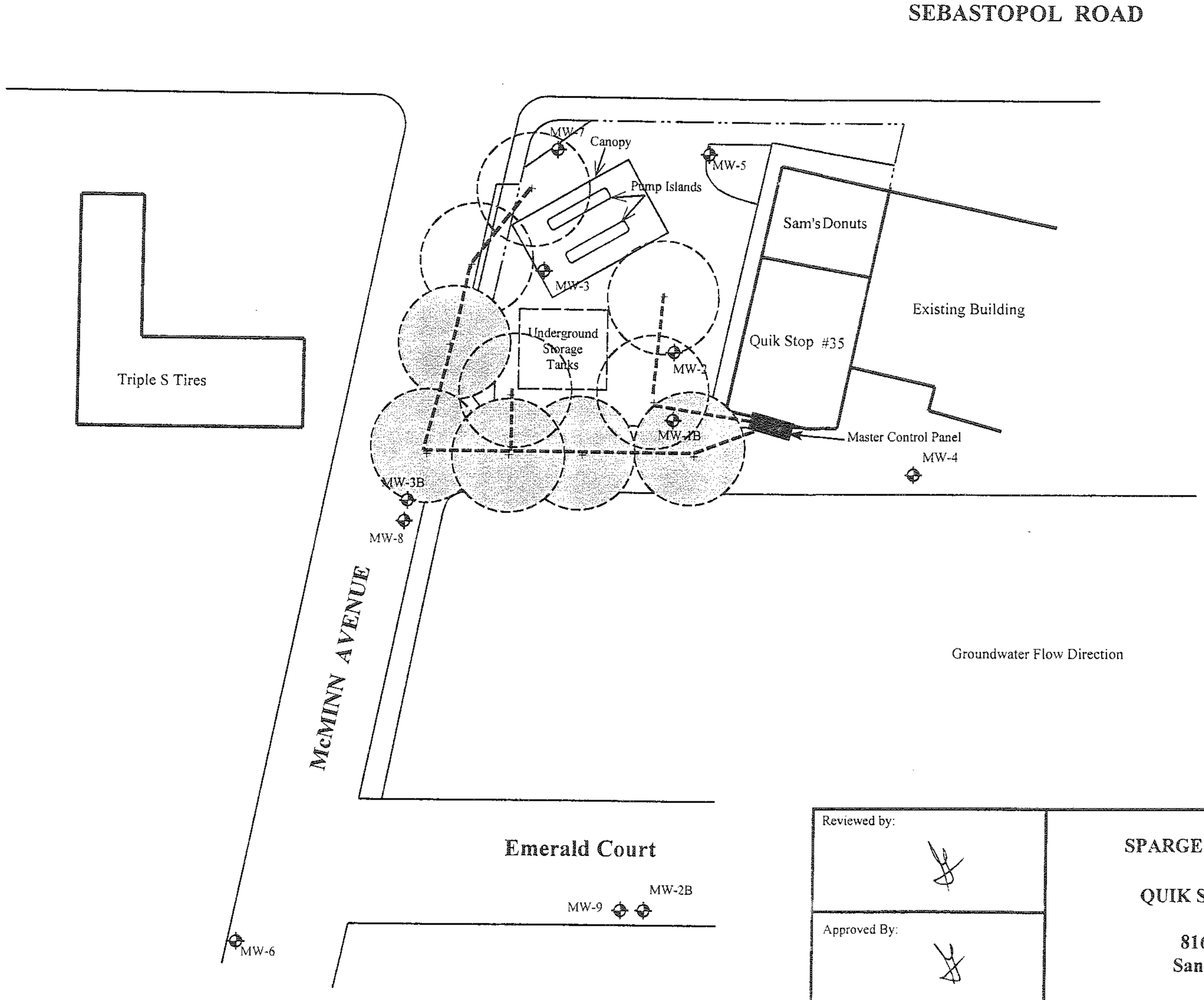
Gary R. Mulkey, R.G. 5842





Base: Compass Maps, Inc.

reviewed by:	SITE VICINITY MAP	Compliance & Closure, Inc.	
approved by:	QUIK STOP MARKETS, INC.		
drawn by: GM	816 McMINN AVENUE		
job no. 12032	SANTA ROSA, CALIFORNIA	date: 1/28/94	drawing no. FIG. 1



Legend

- MW-6 — Monitoring well
- Fuel tank location
- Proposed Single Sparge Well Location
- Approximate Radius of Influence from Sparge Well
- Proposed Double Sparge Well Location

N

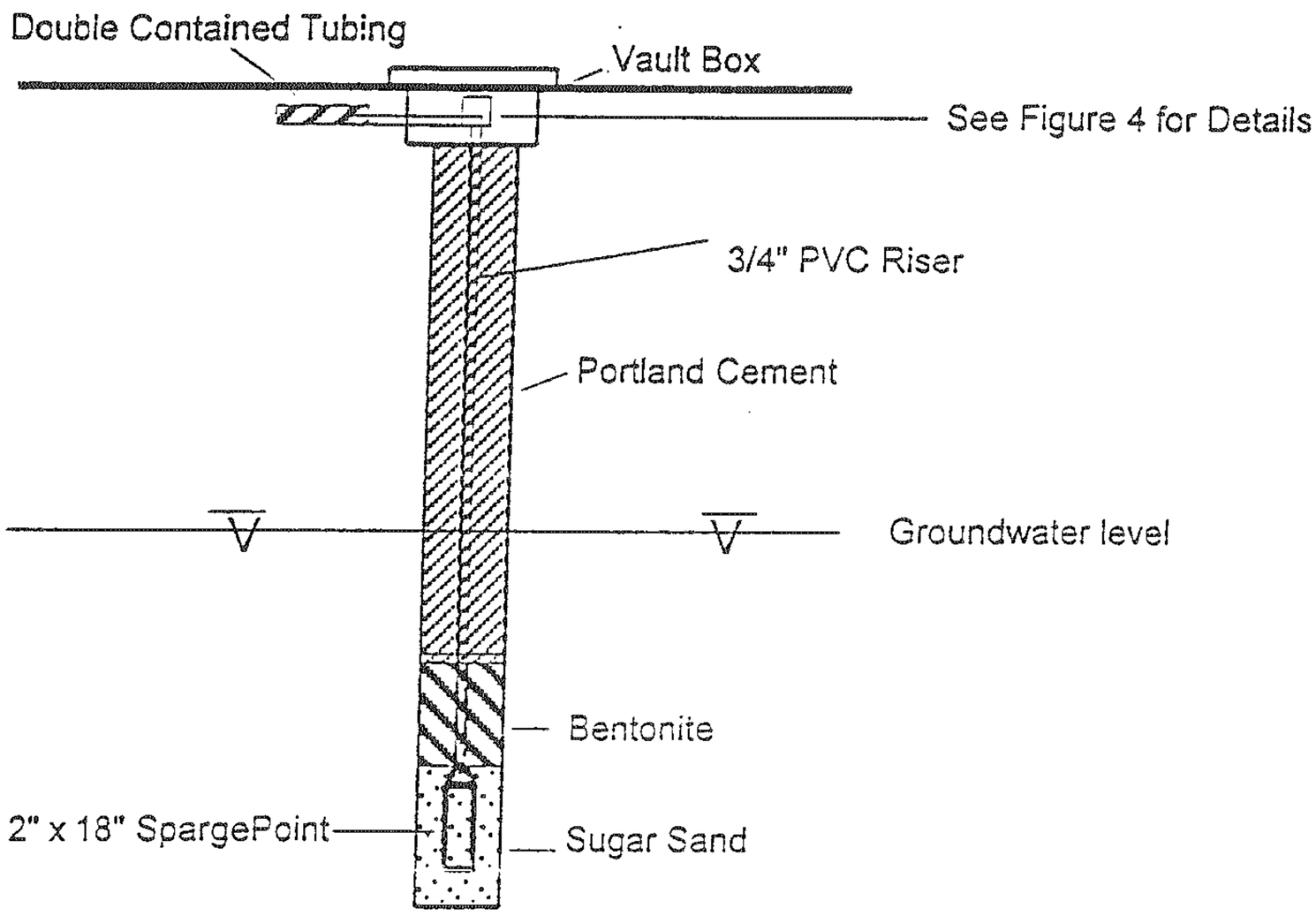
0 40 80

Approximate Scale in Feet

CRWQCB Global ID: T0609700721

Reviewed by:	**SPARGE WELL LOCATION MAP** **QUIK STOP MARKET No. 35** **816 McMinn Avenue** **Santa Rosa, California**	Compliance & Closure, Inc.
Approved By:		Job No.: 12032-3 / Drawn By: NLN Date: 05/20/05 / Fig. #: 2

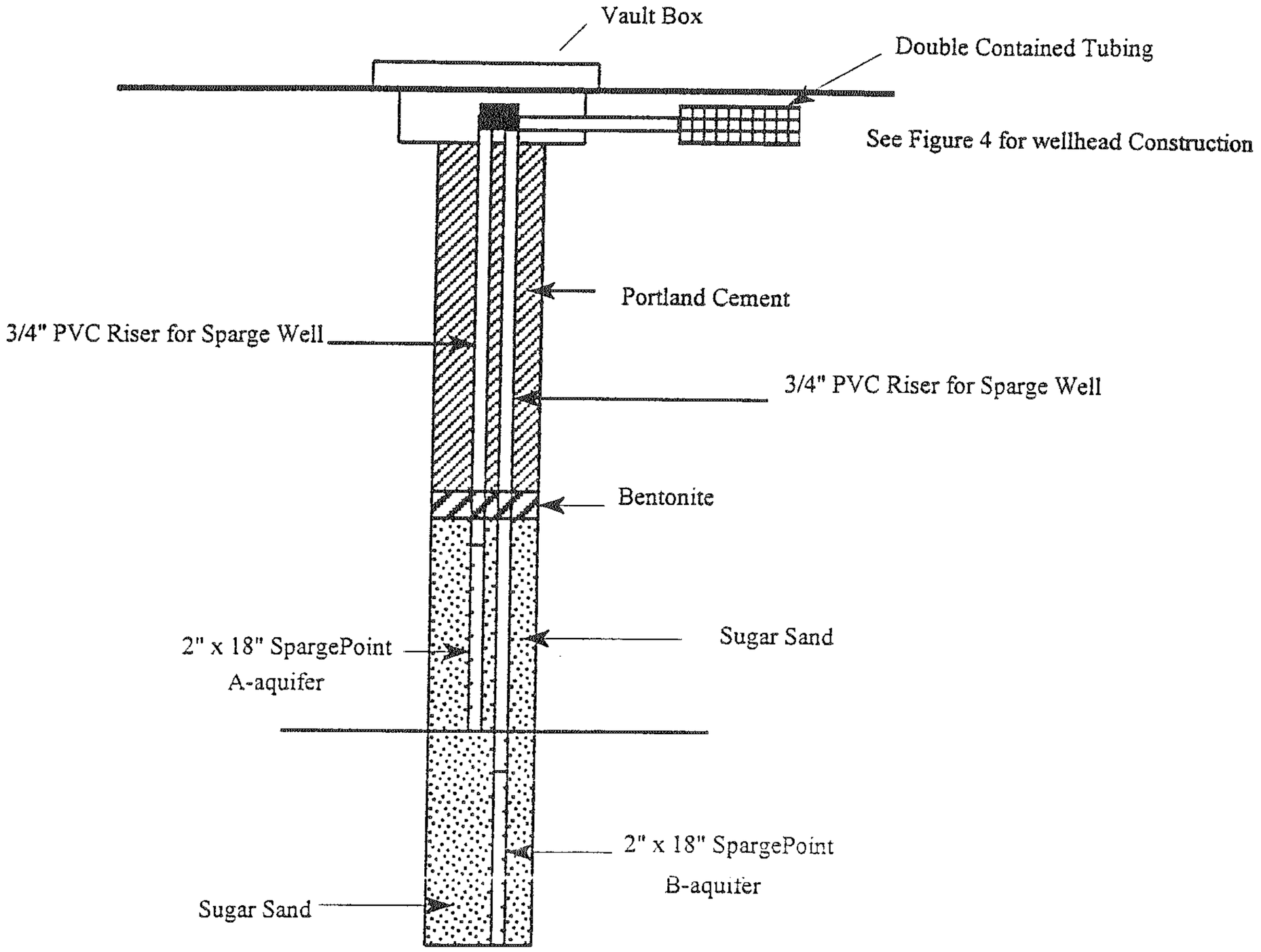
Spargewell Schematic



NOT TO SCALE

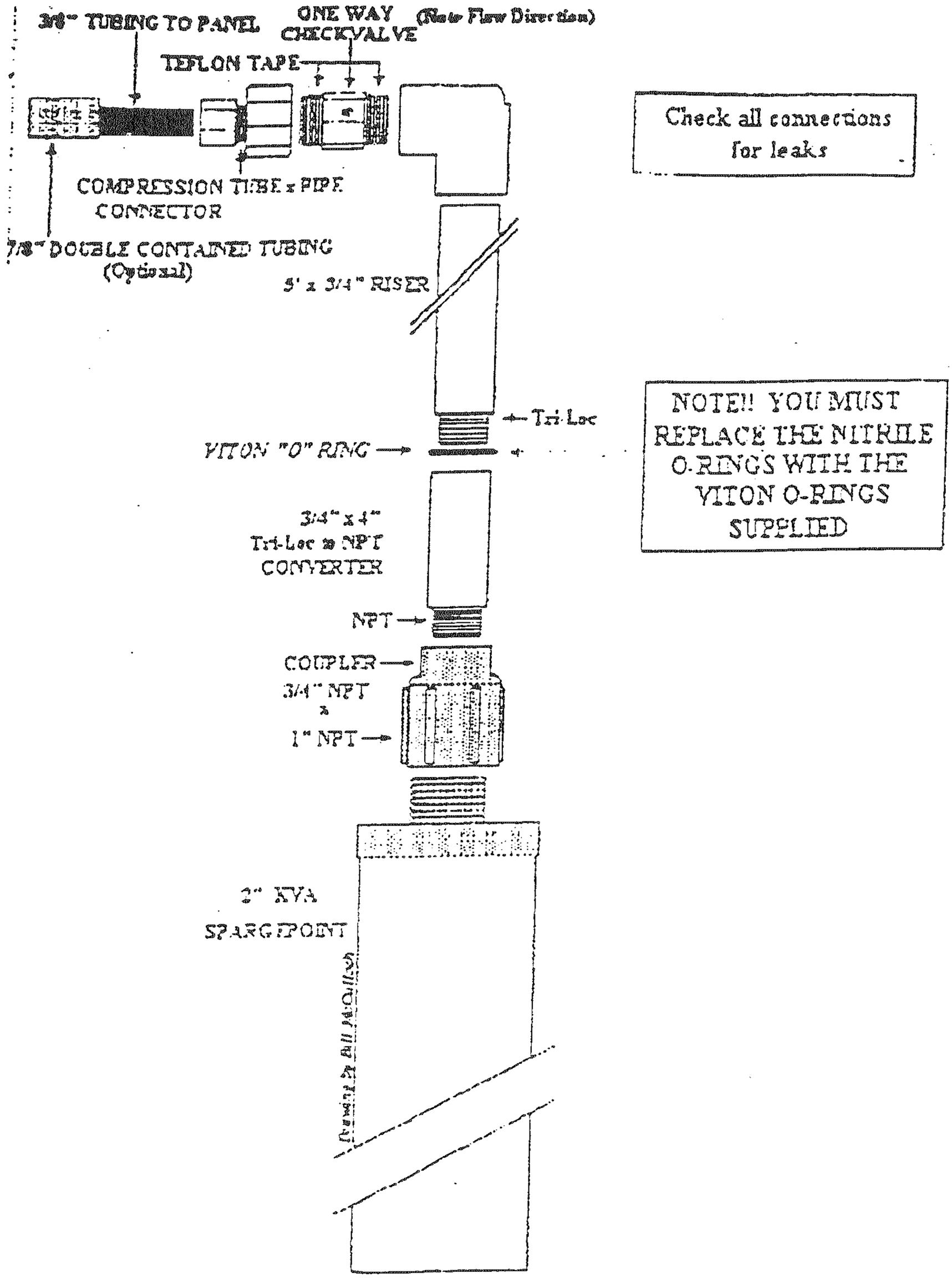
Reviewed By:	**Spargewell Schematic**	Compliance & Closure, Inc.
Approved By:	**Quik Stop Market No. 35** **816 McMinn Avenue** **Santa Rosa, California**	Job No.: 12032-3 / Drawn By: GM Date: 10/20/2005 / Fig. No.: 3

Double Spargewell Schematic



Not To Scale

Reviewed By:	**Spargewell Schematic**	Compliance & Closure, Inc.
Approved By:	**Quik Stop Market No. 35** **816 McMinn Avenue** **Santa Rosa, California**	Job No.: 12032-3 / Drawn By: GM Date: 10/20/2005 / Fig. No.: 4

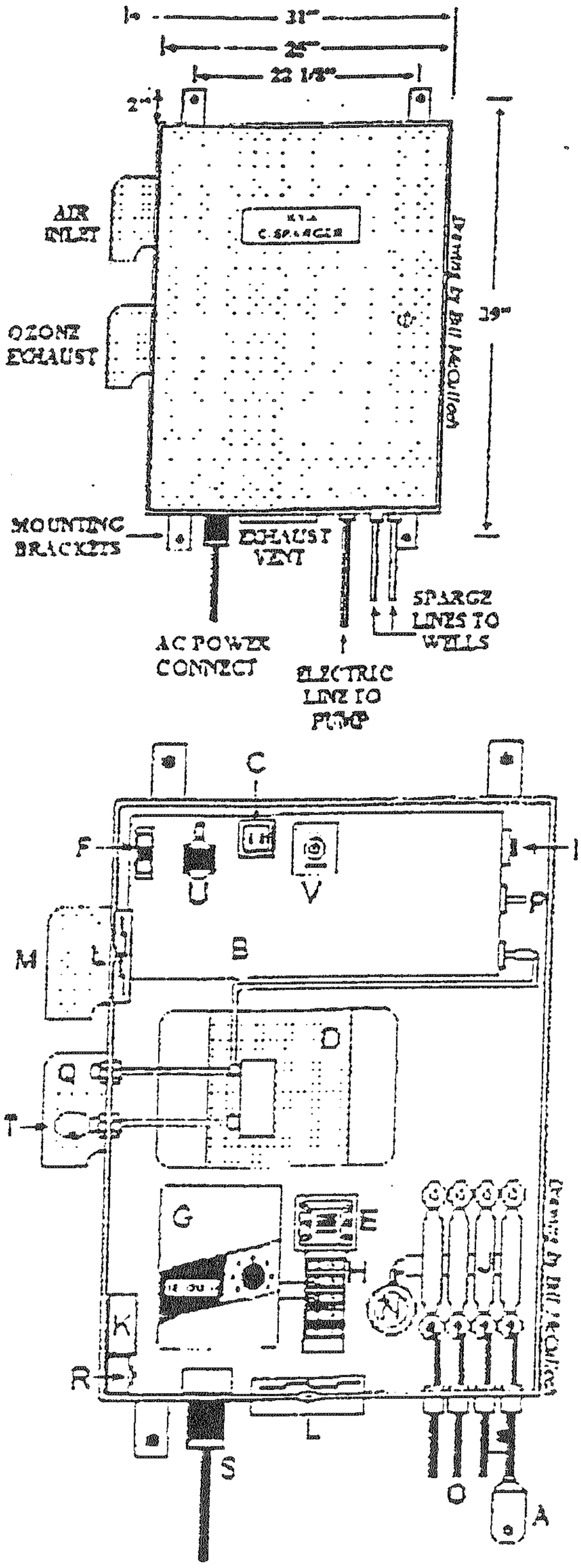


Check all connections for leaks

NOTE!! YOU MUST REPLACE THE NITRILE O-RINGS WITH THE VITON O-RINGS SUPPLIED

Base: Drawing provided by McCulloh Environmental Equipment Sales

Reviewed By:	**Sparge Well Construction Diagram**	Compliance & Closure, Inc.
Approved By:	**Quik Stop Market No. 35** **816 McMinn Avenue** **Santa Rosa, California**	Job No.: 12032-3 / Drawn By: GM Date: 10/20/2005 / Fig. No.: 5

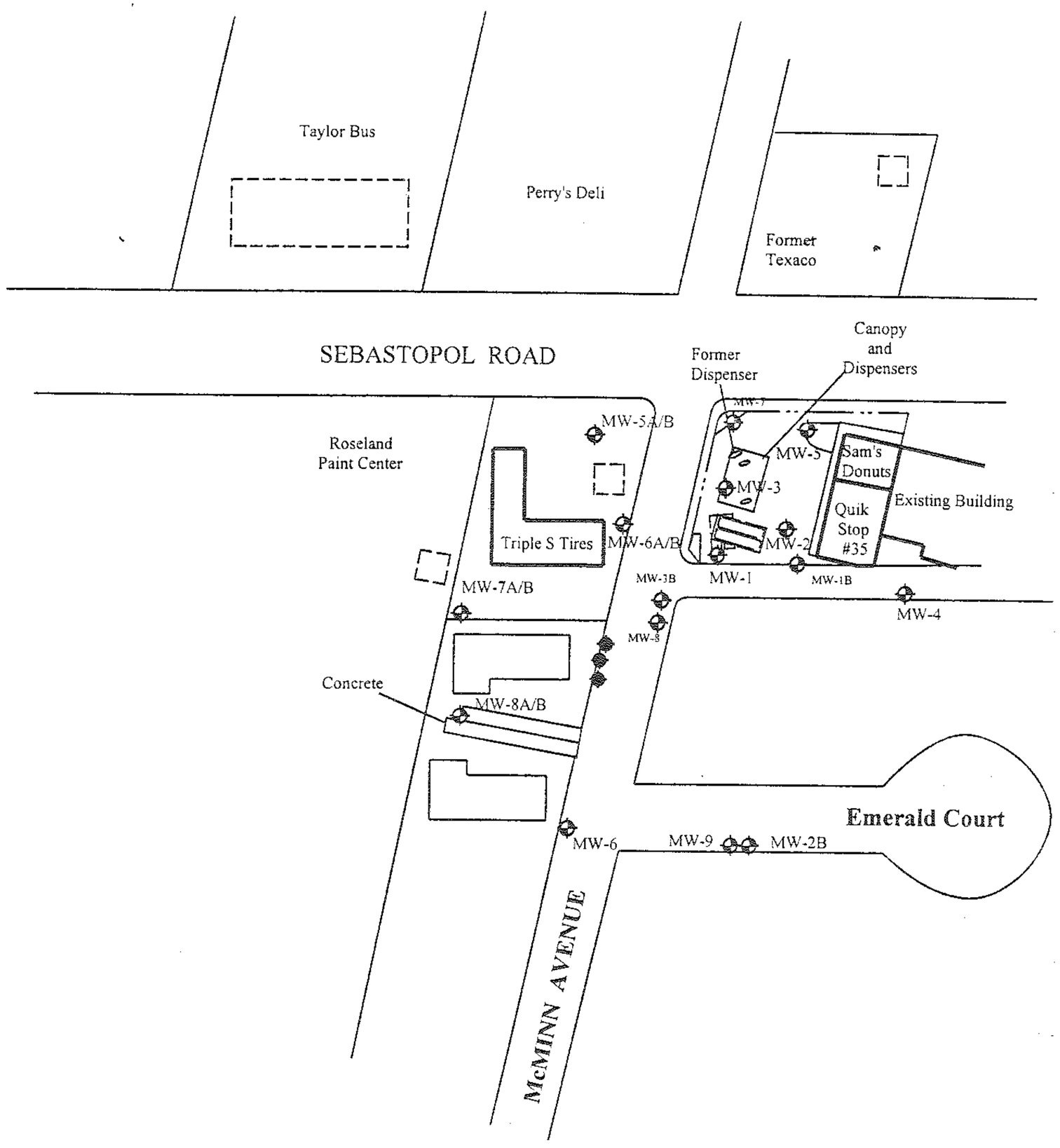


Note: Locations are approximated and are subject to change.

A One-Way Check valve(s)
B Ozone Generator
C Relay
D Air compressor
E Master relay
F 15 amp circuit breaker
G Programmable timer/controller
H Main power strip
I Ozone generator on/off switch
J Solenoid manifold
K Ground fault interrupt (GFI)
L Cooling fan(s)
M Air intake
N 0-100 psi pressure gauge
O Air/ozone lines to wells
P Air intake to ozone generator
Q Air/ozone vent for compressor
R Main power on/off switch
S AC power connect
T Pressure relief for compressor
U Float sensor
V Delay Relay

Base: Drawing provided by McCulloh Environmental Equipment Sales

Reviewed By:	**Master Control Panel Diagram** **Quik Stop Market No. 35** **816 McMinn Avenue** **Santa Rosa, California**	Compliance & Closure, Inc.
Approved By:		Job No.: 12032-3 / Drawn By: GM
		Date: 10/20/2005 / Fig. No.: 6



N

Legend

MW-6 Groundwater Monitoring well

Former Underground Storage Tank Location

Existing Underground Storage Tank Location

MW-8A/B Triple S Tire Monitoring Well
Note: Screen interval of Triple S Tire's B wells are the same as Quik Stop's A Aquifer Wells.

Proposed Groundwater Monitoring Well

0 100 200

Approximate Scale in Feet

CRWQCB Global ID: T0609700721

Reviewed by:	**SITE MAP** QUIK STOP MARKET No. 35 816 McMinn Avenue Santa Rosa, California	Job No.: 12032-3	Drawn By: NLN
Approved By:		Date: 10/20/05	Fig. #: 7